

Amendments to the Specification:

Please replace the paragraph beginning on page 2, line 17 with the following amended paragraph:

Next, as illustrated in FIG. 35, contact holes (CH) leading to the impurity diffused regions of the semiconductor substrate 301 and ~~groves~~ grooves (M) of a designated wiring pattern making electrical connection to the impurity diffused regions are formed using conventional photolithography and etching techniques.

Please replace the paragraph beginning on page 28, line 12 with the following amended paragraph:

In a convention chemical mechanical polishing process using slurry containing alumina particles, the alumina particles may leave be left behind or are buried in the copper surface after contribution to CMP machining, thereby causing problems afterward. On the other hand, as far as the electro-chemical machining method according to the present invention is concerned, electrolytic solution containing a chelating agent is used and the chelation film on the surface has very weak mechanical strength so as to be easily removed ~~sufficiently~~ by wiping or the like using electrolytic solution containing no polishing particles.

Please replace the paragraph beginning on page 31, line 2 with the following amended paragraph:

The wafer table 42 is designed to, e.g., vacuum suck the wafer W by a vacuum ~~chucking~~ means. The driving motor 44 is connected to a table driver 53 from which the driving current is supplied. The driving current is controlled for rotating the wafer table 42 at a desired number of revolutions. The X-axis motor 49 is connected to an X-axis driver 54 for rotating upon receiving driving current therefrom and the X-axis slider 48 is driven in the X-axis direction by way of the ball screw shaft 49a and the movable member 49b. The driving current to be supplied to the X-axis motor 49 is controlled for controlling the velocity of the wafer table 42 in the X-axis direction.

Please replace the paragraph beginning on page 31, line 12 with the following amended paragraph:

The electrolytic solution supplying apparatus 81 supplies electrolytic solution containing electrolyte and additive onto the wafer W by way of a supply nozzle (not shown). Preferably, the electrolytic solution is adjusted to the temperature of about 80°C or lower for accelerating anode oxidation. The electrolytic solution EL is stored in the electrolytic solution bath (or reservoir) 47 for supplying ~~the~~ electrolytic solution onto the surface to be machined of the wafer W. It is also possible that a sufficient amount of the electrolytic solution EL is supplied may be provided onto the surface to be machined of the wafer W wherein the electrolytic solution EL is held thereon by surface tension. After ~~elapse of~~ a predetermined, the wafer table 42 is ~~driven to~~ rotated in order to substantially remove ~~for letting~~ the electrolytic solution EL on the wafer ~~away therefrom~~. As described hereinafter, it is also possible to make the wiper from a material from which electrolytic solution exudates onto the wafer.

Please replace the paragraph beginning on page 32, line 12 with the following amended paragraph:

Further, a construction of the electro-chemical machining tool holder portion 10 of the electro-chemical machining apparatus according to a preferred embodiment of the present invention is illustrated in FIG. 14. The electro-chemical machining tool holder portion 10 includes a holder member 12 having a mechanism for holding the electro-chemical machining tool 11 while applying pressure thereto, a holding apparatus (device) 13 for holding the holder member 12 in such a manner as to rotate by way of a main shaft 13a held by the holding apparatus 13 and a cylinder apparatus 14 15 provided on the main shaft motor 14.

Please replace the paragraph beginning on page 33, line 13 with the following amended paragraph:

There is provided on the bottom surface of the insulation plate ~~21d~~ 12d, an electrode plate 23 acting as a cathode of the electro-chemical machining tool 11. A wiper 24 is mounted in such a manner so as to cover the electrode plate 23 and the insulation plate 12d using an O-ring 24a. The wiper 24 has a surface made from soft brushing material, sponge material, porous material or other elastic material for wiping the wafer W fixedly placed on a wafer table 42. The wiper 24 is made from, e.g., porous material such as polyvinyl acetal (PVA), (poly)urethane foam, Teflon® (~~a trademark~~) brand foam, non-woven Teflon® fabric, melamine resin, epoxy resin, etc. Required electrical characteristics of the material for the wiper include insulation that does not ~~to~~ conduct electricity and ions. A fiber material is preferable for this ~~reason~~ and also for its ~~the~~ capability to have pores that are filled with electrolytic solution in order to wet the gap between the electrode ~~22~~ 23 and the wafer W. Also, such wiper 24 is capable of wiping the wafer W surface without causing any scratches or the like.

Please replace the paragraph beginning on page 33, line 29 with the following amended paragraph:

Since the holder member 12 holding the electro-chemical machining tool 11 is coupled to the main shaft 13a of the holding apparatus 13, rotation of the main shaft 13a allow the electrolytic machining tool 11 to rotate.

Please replace the paragraph beginning on page 38, line 3 with the following amended paragraph:

The controller 55 ~~has a function of controlling~~ controls the entire operation of the electro-chemical machining apparatus. That is, the controller 55 supplies a control signal 52s to a main shaft driver 52 for controlling the number of revolutions of the electro-chemical machining tool 11, a control signal 51s to the Z-axis driver 51 for position controlling in the ~~XZ~~-axis direction of the electro-chemical machining tool 11, a control signal 53s to a table driver 53 for controlling the number of revolutions of the wafer W and a control signal 54s to an X-axis driver 54 for controlling the speed of the wafer W in the X-axis direction. Also, the controller 55 controls the operation of an electrolytic solution supplying apparatus 81 and a slurry control apparatus 71 for controlling the operation of supplying the electrolytic solution EL and the slurry SL to the machining head portion.